

Division of Cancer Treatment and Diagnosis (DCTD)

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*Program Director, Division of Cancer Treatment and Diagnosis, NCI
Cancer Imaging Program*

NCI Organization

Extramural



Division of Cancer
Biology



Division of Cancer
Control and
Population
Sciences



Division of
Cancer
prevention




Division of
Extramural
activities

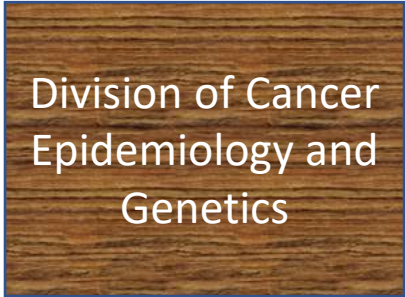


Division of Cancer
Treatment and
Diagnosis

Intramural



Center for Cancer
Research



Division of Cancer
Epidemiology and
Genetics

Division of Cancer Treatment and Diagnosis (DCTD)

- Cancer Imaging Program
- Cancer Diagnosis Program
- Cancer Therapy Evaluation Program
- Radiation Research Program
- Biometric research Program
- Development Therapeutics Program
- Translational Research Program
- Office of Cancer Complementary and Alternative Medicine
- Office of Cancer Clinical Proteomics Research

Diagnosis and Treatment

- Cancer Biology
- Molecular Imaging
- Nanotechnology
- Target identification,
- Drug development
- Clinical trials
- Imaging: diagnosis, treatment planning; radiation therapy treatment evaluation
- Technology development
- Biobanks, genomic, proteomic and imaging archives
- Information Technologies
 - Artificial Intelligence
 - Algorithm development
 - Machine learning
 - Revolutionary computing
 - Treatment Planning
 - Predictive analysis
 - Robotics

DCTD: Major Initiatives

NCI Clinical Trials
Stewardship
Initiative

NCI-supported
Precision Medicine
Oncology

Developmental
Therapeutics Clinic
(DTC)

NCI Experimental
Therapeutics
(NExT) Program

NCI Formulary

NCI Patient-
Derived Models
Repository
(PDMR)

NCTN/NCORP
Data Archive

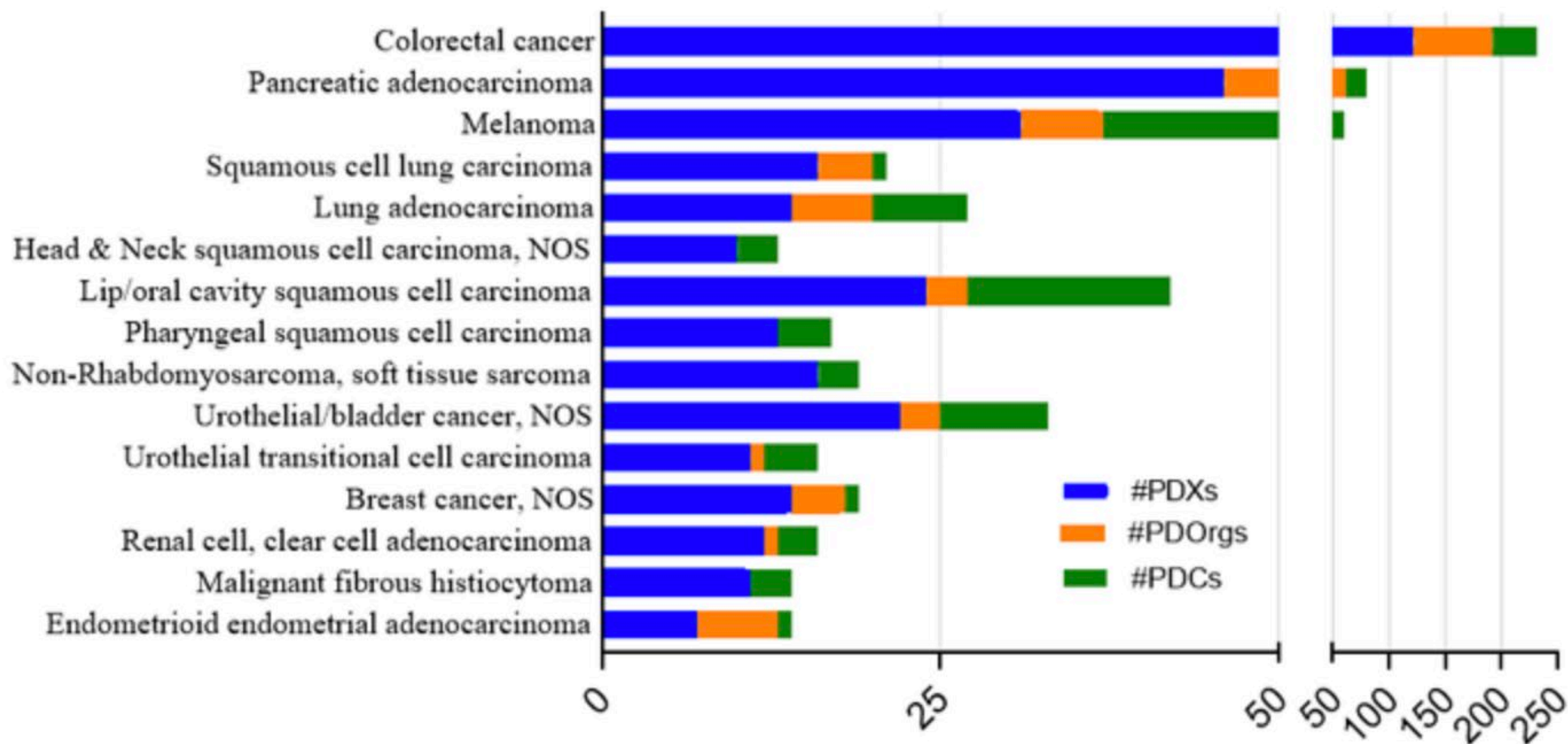
Specialized
Programs of
Research
Excellence

Quantitative
Imaging Network

Co-Clinical Imaging
Resources
Program

Cancer Moonshot:
Biobank

The NCI Patient-Derived Models Repository (PDMR)

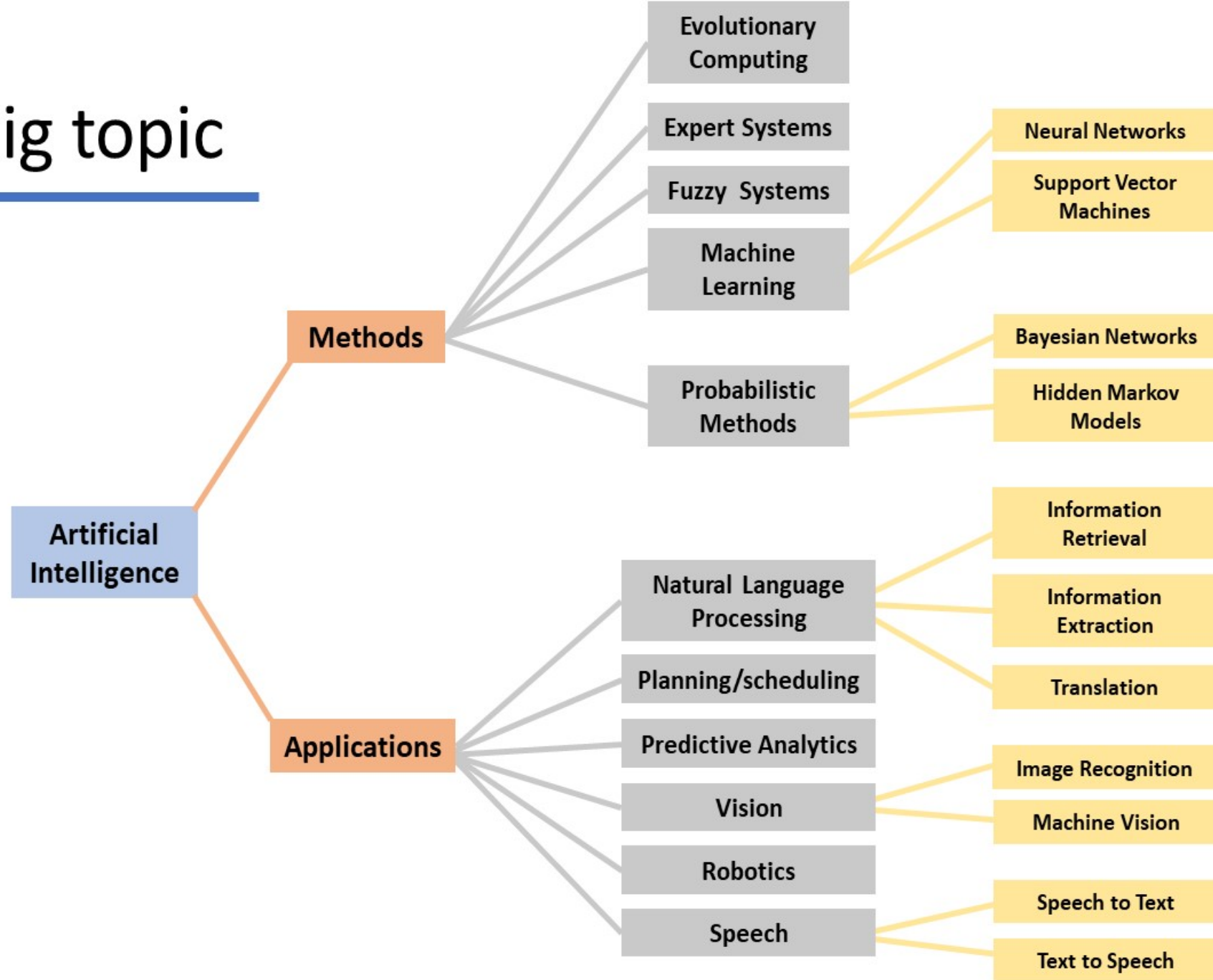


Cancer Diagnoses, Types, and Numbers of Publicly Available PDMR Models as of May 2021

Study of “exceptional responders”
yields clues to cancer and
potential treatments - **More...**



AI is a big topic



Cancer Imaging Program (CIP)

CIP: Focus Areas and Funding Support

Investigator initiated R01 grants

Academic Industrial Partnerships

Nanotechnology

Quantitative Imaging

Information Technologies for Cancer Research (ITCR)

Bioengineering Research Partnerships and Grants (BRP/BRG)

Innovative Molecular Analysis Technologies in Cancer Research (IMAT)

Small Business grants and contracts (SBIR/STTR)

QIN Tools Ready for Clinical Trials (An Example)



IB Clinic® 2.0 User Manual

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Certifications

Imaging Biometrics, LLC is ISO 13485 certified. IB Clinic and its modules are cleared by the US FDA and have also declared CE Marking.



Contacting Imaging Biometrics

For assistance, contact the IB Customer Service Department by phone at 262.439.8252 (US) or send email to support@imagingbiometrics.com.

In the European Community, contact us at:



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5 Chestnut Close
Down Ampney
Gloucestershire GL7 5RA, UK

IB Clinic is a FDA-cleared and CE marked set of tools which perform and streamline brain image post-processing.

- Standardized and proven algorithms
- Default settings to allow generation of parametric images with 3 or 4 clicks
- Automatic brain mask generation
- Automatic leakage correction
- Ability to integrate with multiple PACS to access acquired data and distribute results
- Automatic arterial/vascular input function generation
- Longitudinal reporting

Workflow

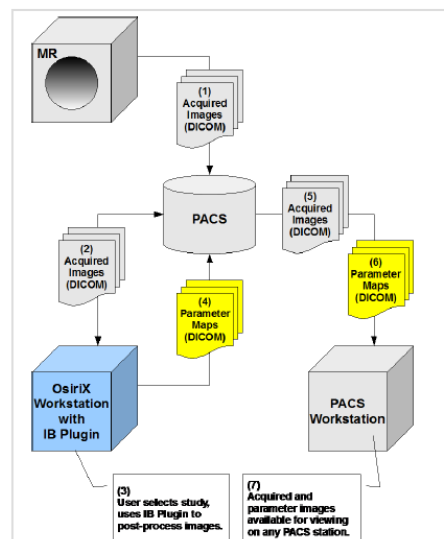


Figure 3. Workflow for using IB Clinic within a PACS environment.

Developing Molecular Imaging Capabilities

Cancer
Biology

**Identify cancer
inflammation targets for
imaging**

Target identification

Cells, cytokines, growth factors,
Chemical gradients etc

- Target specificity
- Stability

in vitro

Imaging

**Synthesize imaging agents
Validate imaging approaches**

- Apply Fast imaging technologies
- Adapt probe chemistry and designs to inflammation cellular physiology targets

Targeting Molecules

+ imaging

(MRI, PET, SPECT, CT, US,
Optical, multi-modality)

In vivo Imaging

Image Acquisition,
Biodistribution,
Data Analysis

- Target specificity
- Stability, biodistribution & toxicity
- sensitivity & specificity

in vivo

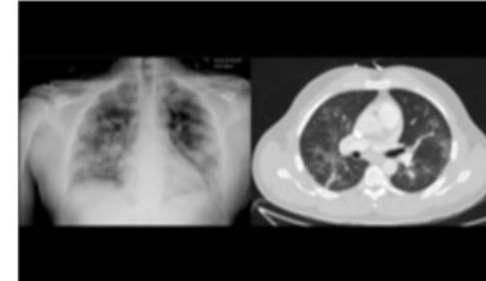
Develop molecular imaging approaches for characterizing the dynamics of cancer associated inflammation



The Cancer Imaging Archive posts COVID-19 imaging data to benefit community

The Frederick National Lab (FNL) has published an article about TCIA's COVID-19 response efforts!

“Publicly available datasets related to COVID-19 are appearing in an unexpected place—the Cancer Imaging Archive (TCIA), a project of the Division of Cancer Treatment and Diagnosis of the National Cancer Institute.



Since the start of the pandemic, researchers around the world have been racing to learn as much as possible about the virus—how it spreads, how to diagnose and treat it, and how to develop vaccines against it. One way to help speed up scientific discovery is data sharing.”

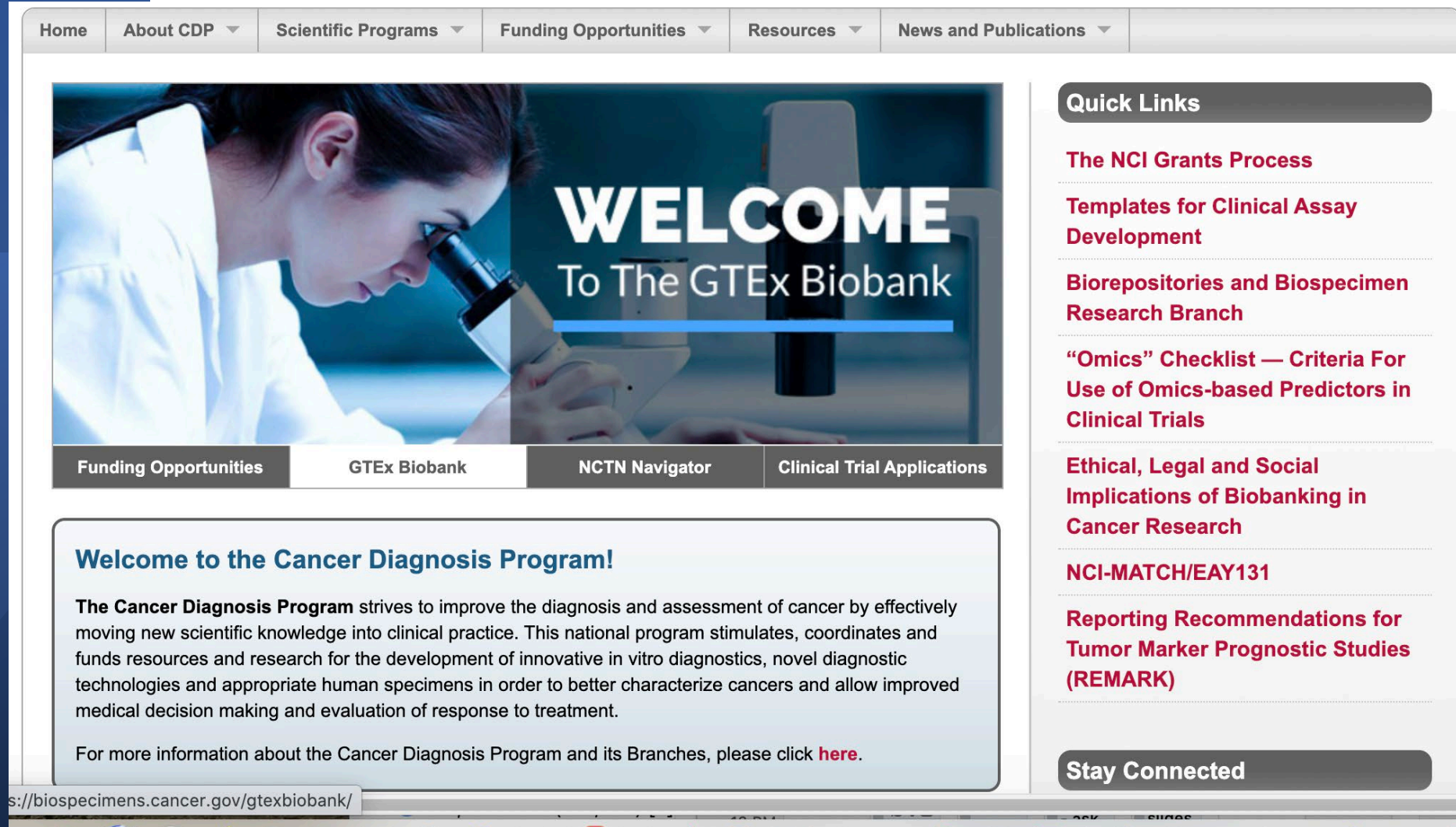
Read the full article [here](#) and find the COVID Collections available on TCIA [here](#).

FNL newsletter
February 2021 by Justin Kirby



Cancer Diagnosis Program (CDP)

CDP Improve the diagnosis and assessment of cancer



The screenshot displays the Cancer Diagnosis Program (CDP) website. The top navigation bar includes links for Home, About CDP, Scientific Programs, Funding Opportunities, Resources, and News and Publications. The main banner features a scientist using a microscope with the text "WELCOME To The GTEX Biobank". Below the banner are four buttons: Funding Opportunities, GTEX Biobank, NCTN Navigator, and Clinical Trial Applications. A central box titled "Welcome to the Cancer Diagnosis Program!" describes the program's mission to improve cancer diagnosis and assessment. To the right, a "Quick Links" section lists various resources, including the NCI Grants Process, templates for clinical assay development, and ethical considerations in biobanking. A "Stay Connected" button is located at the bottom right.

Home About CDP Scientific Programs Funding Opportunities Resources News and Publications

WELCOME
To The GTEX Biobank

Funding Opportunities GTEX Biobank NCTN Navigator Clinical Trial Applications

Welcome to the Cancer Diagnosis Program!

The Cancer Diagnosis Program strives to improve the diagnosis and assessment of cancer by effectively moving new scientific knowledge into clinical practice. This national program stimulates, coordinates and funds resources and research for the development of innovative in vitro diagnostics, novel diagnostic technologies and appropriate human specimens in order to better characterize cancers and allow improved medical decision making and evaluation of response to treatment.

For more information about the Cancer Diagnosis Program and its Branches, please click [here](#).

Quick Links

- [The NCI Grants Process](#)
- [Templates for Clinical Assay Development](#)
- [Biorepositories and Biospecimen Research Branch](#)
- ["Omics" Checklist — Criteria For Use of Omics-based Predictors in Clinical Trials](#)
- [Ethical, Legal and Social Implications of Biobanking in Cancer Research](#)
- [NCI-MATCH/EAY131](#)
- [Reporting Recommendations for Tumor Marker Prognostic Studies \(REMARK\)](#)

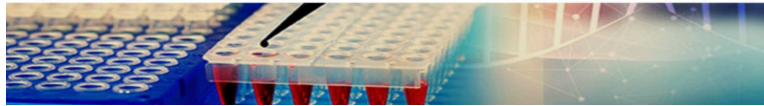
Stay Connected

s://biospecimens.cancer.gov/gtexbiobank/

Cancer Diagnosis Program (CDP)

Biorepository and Biospecimen Research Branch

Funding Opportunities
Revision Applications for Validation of Biomarker Assays Developed Through
NIH-Supported Research Grants: PAR-20-074
Assay Validation of High-Quality Markers for Clinical Studies in Cancer: PAR-20-314
Assay Validation of High-Quality Markers for Clinical Studies in Cancer: PAR-20-313



Diagnostic Biomarkers and Technology Branch

National Cancer Institute's Investigator-Initiated Early Phase Clinical Trials for Cancer Treatment and Diagnosis (R01 Clinical Trial Required): PAR-21-033

NCI Clinical and Translational Exploratory/Developmental Studies (R21 Clinical Trial Optional): PAR-20-292

Diagnostic Evaluation Branch

Academic-Industrial Partnerships for Translation of Technologies for Diagnosis and Treatment (R01 — Clinical Trial Optional): PAR-18-530

Just Launched!

The Cancer Moonshot Biobank

Working with research participants to donate samples over the course of their cancer treatment, creating a critical national resource for cancer research



The NCTN Navigator is a publicly searchable database of specimens from completed NCTN Phase 3 clinical trials. [More...](#)

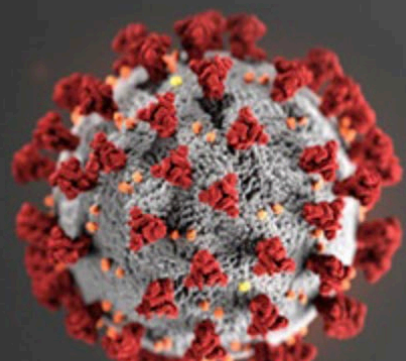


Pathology Investigation and Resources

Cancer Therapy Evaluation Program (CTEP)

Guidance for NCI Clinical Trial Activities Affected by the Novel Coronavirus

[More...](#)



NCI

National Clinical Trials Network

a National Cancer Institute program

NCTN Overview

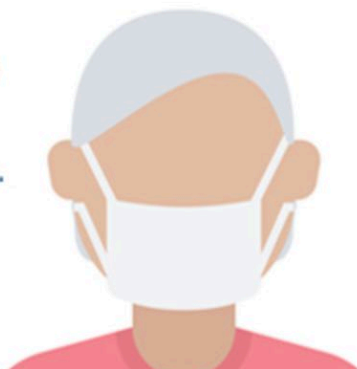
NCI transformed its longstanding Cooperative Group Program into the new NCI National Clinical Trials Network (NCTN) Program. [More...](#)

Cancer Therapy Evaluation Program Early Drug Development



How Does COVID-19 Affect People with Cancer? NCCAPS Will Help Find Out.

[More...](#)



NCI-COG Pediatric MATCH

(Molecular Analysis for Therapy Choice)

is a phase 2 clinical trial for children and adolescents with advanced solid tumors – including non-Hodgkin lymphomas, brain tumors, and histiocytoses – that have not responded to treatment or have progressed on standard therapy. [More...](#)



Experimental Trials Network

The National Cancer Institute is leading the way in the pharmaceutical industry in the development of individual investigational innovative cancer therapies. The Experimental Clinical Trials Network is testing these therapies using an inclusive team-based approach.



Cancer Therapy Evaluation Program (CTEP)

Career Development Opportunities

CTEP recognizes the importance of encouraging and supporting young investigators as they embark upon a clinical cancer research career. We have implemented several programs geared to assist young investigators navigate the CTEP program and the LOI development and submission process. These programs include:

- **Early Career Investigator Development LOI**
- Other Early Career Development Resources
 - **2018 ASCO Early Career Investigator Meeting** (PDF)
 - **ETCTN Overview** (PDF)
 - **Letters of Intent (LOI) Basics** (PDF)
 - **Drug Project Team Basics** (PDF)
- **Radiopharmaceutical Development Initiative**
- **CTEP/IDB Externship Fellow Program**

Program Offering

CTEP Investigation Drug Branch (IDB) Externship Program

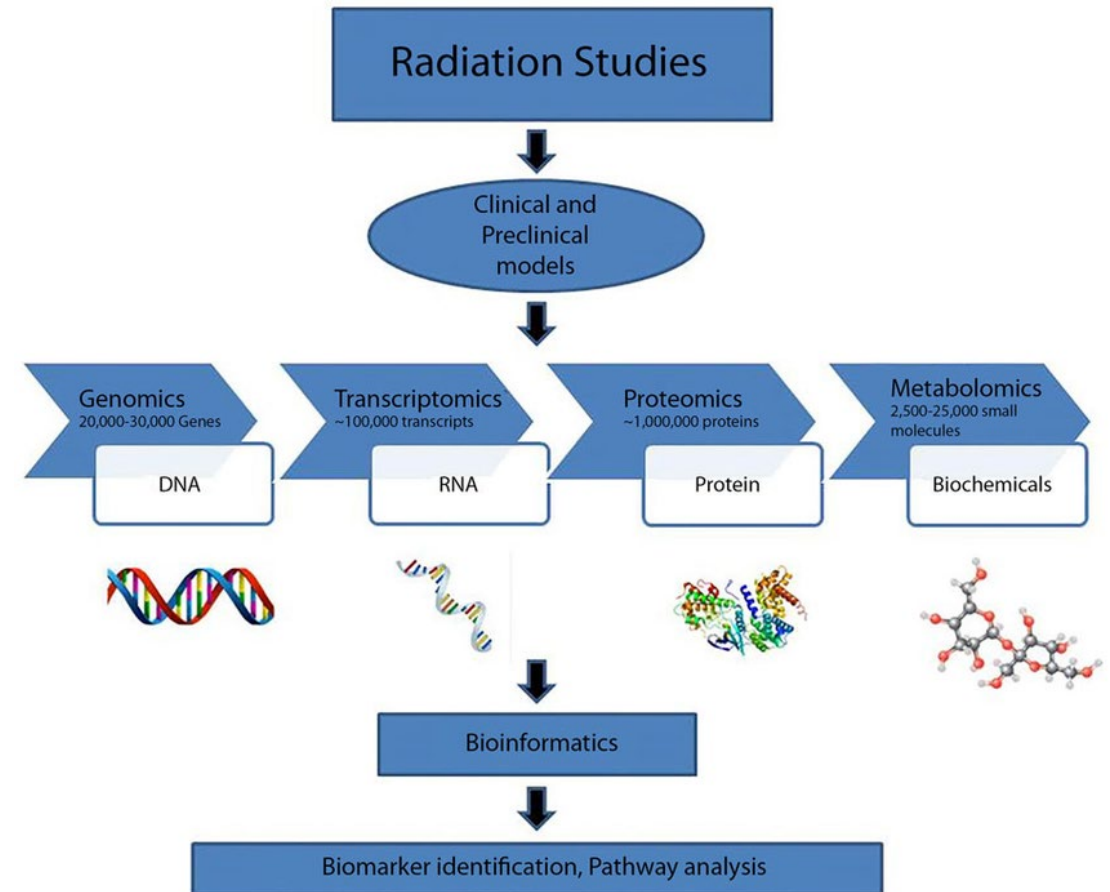
Radiation Research Program (RRP)

Radiation Research Program (RRP)

Focused on Novel Radiotherapy Research

Supports research across the radiation sciences spanning clinical trials, combined modality radiotherapy, experimental therapeutics, radiation treatment planning, radiobiology, physics and technology.

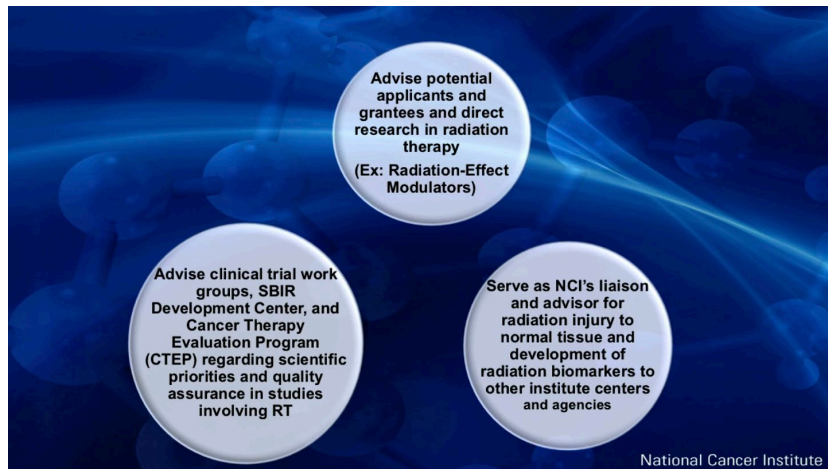
Also coordinates activities of the RRP Program with related programs within the NCI and NIH that address cancer health disparities, including global health.



Radiation Research Program (RRP)

Radiation Research Program Interest Groups

IGs collectively support development of clinical trials that incorporate radiation approaches, development of guidelines for the field, organization of workshops, and publication of editorials and reports.



[Brain Metastases & GBM](#)

[Hepatocellular Carcinoma Interest Group](#)

[Quantitative Imaging in Radiation Therapy Interest Group](#)

[Immunotherapy & Radiation Interest Group](#)

[Sarcoma Interest Group](#)

[Gastrointestinal Malignancy Interest Group](#)

[TRT Interest Group](#)

Development Therapeutics Program (DTP)


Developmental Therapeutics Program (DTP)

The NCI Development Therapeutics Program (DTP) provides services and resources to the academic and private-sector research communities worldwide to facilitate the discovery and development of new cancer therapeutic agents

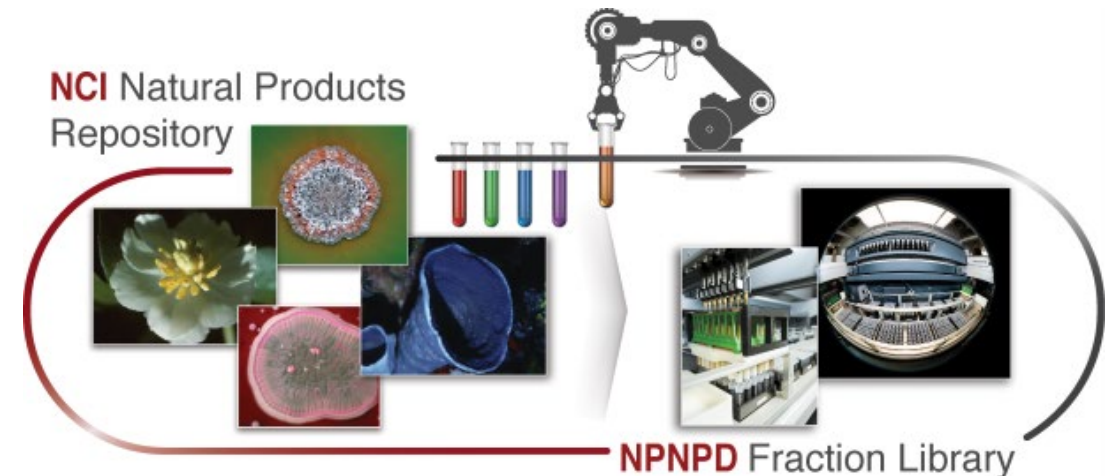
Funding Opportunity Announcement:

[PAR-17-331 Discovery of Small Molecule Immunomodulators for Cancer Therapy \(R01\)](#)

NCI Drug Development Workshop:
How to Advance
A Therapeutic Candidate
from Bench to Bedside



Ten Discrete Webinars
Fridays, 12:00 pm – 2:30 pm ET • July 23, 2021 – December 10, 2021



Translational Research Program (TRP)



Research to Investigate

PRINCIPAL INVESTIGATOR: Steven Paterno, PhD, deputy director of the Duke Cancer Institute

PROJECTS SUPPORTED BY THE P20 SPORE:

- Lung cancer disparities, led by Jennifer Freedman, PhD, and Jeffrey Clarke, MD
- Stomach cancer disparities, led by Melina Epplein, PhD, and Katherine Garman, MD

disciplinary program of ...
National Institutes

Translational Research Program (TRP)



NCI Specialized Programs of Research Excellence (SPORE)

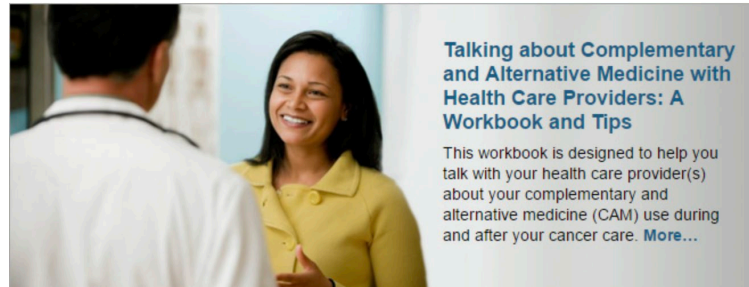
Translational Research Program (TRP)
Division of Cancer Treatment and Diagnosis (DCTD)
National Cancer Institute (NCI)
National Institutes of Health (NIH)
Website: trp.cancer.gov

Peter Ujhazy, MD, PhD
2018 NCI IMAT PI Meeting

Office of Cancer Complementary and Alternative Medicine (OCAM)

Office of Cancer Complementary and Alternative Medicine (OCAM)

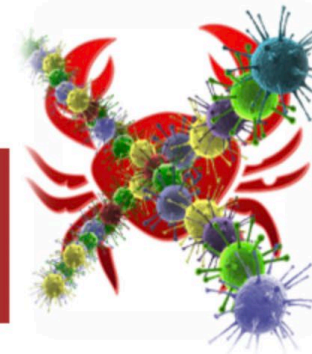
Established in October 1998 to coordinate and enhance the activities of the National Cancer Institute (NCI) in the arena of complementary and alternative medicine (CAM)



International Activities:
Chinese Medicine
Indian Medicine
Research Resources



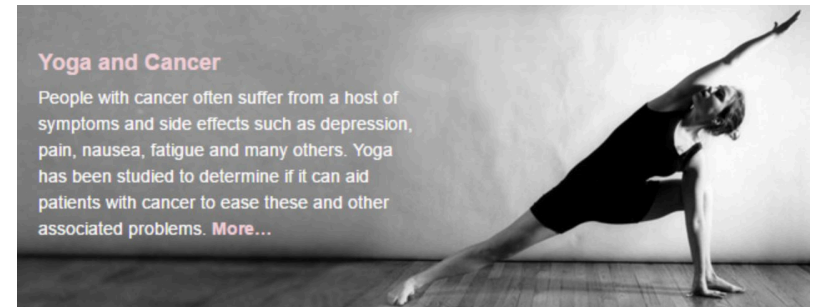
Microbial-based Cancer Therapy - Bugs as Drugs



R21 for early stage research- [PAR 19-194](#)

R01 For mature projects- [PAR-193](#)

Technologies to Overcome Cancer



DCTD Funding Opportunities

Trans-DCTD

Funding Opportunities

- Proteome Characterization Centers (PCCs) for Clinical Proteomic Tumor Analysis Consortium **(U24) RFA CA 21-023**
- Proteogenomic Data Analysis Centers (PGDACs) for Clinical Proteomic Tumor Analysis Consortium **(U24) RFA CA 21-024**
- Proteogenomic Translational Research Centers (PTRCs) for Clinical Proteomic Tumor Analysis Consortium **(U21) RFA CA 21-025**
- NCI Clinical and Translational Exploratory/Developmental Studies - **(R21) PAR 20-293**

DCTD related Trans-NCI Funding Opportunities

- Oncology Co-Clinical Imaging Research Resources **(U24) PAR 18-841**
- Small Cell Lung Cancer (SCLC) Consortium: Biology, Therapy and Resistance **(U01) PAR 19-361**
- Microbial-based Cancer Therapy - Bugs as Drugs **(R01) PAR 19-193**
- Microbial-based Cancer Therapy - Bugs as Drugs **(R21) PAR 19-194**
- NCI Clinical and Translational Exploratory/Developmental Studies - **(R21) PAR 20-293**
- Revision Applications for Validation of Biomarker Assay Development **(R01) PAR 20-074**

DCTD related Trans-NIH Funding Opportunities

- Advancing Translational and Clinical Probiotic/Prebiotic and Human Microbiome Research **(R01) PAR 18-902**
- Bioengineering Research Grants (BRG) **(R01) PAR 19-158**
- Exploratory/Developmental Bioengineering Research Grants (EBRG) **(R21) PA- 149 (150)**
- Mechanisms and Consequences of Sleep Disparities in the U.S. **(R01) PAR 20-164**
- Small Research Grants for Analyses of Gabriella Miller Kids First Pediatric Research Data **(R03) PAR-375**
- Academic-Industrial Partnerships for Translation of Technologies for Diagnosis and Treatment **(R01) PAR 21-166**



Major Initiatives

DCTD Programs

[Biometric Research Program](#)

[Cancer Diagnosis Program](#)

[Cancer Imaging Program](#)

[Cancer Therapy Evaluation Program](#)

[Developmental Therapeutics Program](#)

[Radiation Research Program](#)

[Translational Research Program](#)

[Office of Cancer Clinical Proteomics Research](#)

Major Initiatives

Last Updated: 03/22/2021

Major Initiatives

- **NCI Clinical Trials Stewardship Initiative**

Information on NCI's efforts to advance the public health impact of cancer trials through the implementation of key NIH policies affecting the conduct and management of NCI-funded clinical trials.

- **NCI-supported Precision Medicine Oncology Research Activities**

Information on NCI-supported precision medicine clinical trials and research networks.

- **Developmental Therapeutics Clinic (DTC)**

Develops new treatments for patients with advanced cancer through innovative early-phase clinical trials.

- **NCI Experimental Therapeutics (NExT) Program**

Advances clinical practice and brings improved therapies to patients with cancer by supporting the most promising new drug discovery and development projects.

DCTD Programs

Biometric Research Program

Cancer Diagnosis Program

Cancer Imaging Program

Cancer Therapy Evaluation Program

Developmental Therapeutics Program

Radiation Research Program

Translational Research Program

Office of Cancer Clinical Proteomics Research

Office of Cancer Complementary and Alternative Medicine



Funding Opportunity Announcements (FOAs)

DCTD Programs

Trans-DCTD

Trans-NCI

Trans-NIH

Funding Opportunities through DCTD's Programs

Visit the websites of DCTD's individual programs for more information on currently available funding opportunities.

- [Cancer Diagnosis Program](#)
- [Cancer Imaging Program](#)
- [Cancer Therapy Evaluation Program](#)
- [Developmental Therapeutics Program](#)
- [Radiation Research Program](#)

Grantsmanship Resources – NCI

[NCI-wide Funding](#)

[NCI Office of Grants Administration](#)

[NCI Division of Extramural Activities](#)

[The NCI Grants Process](#)

[Guidelines and Tools for Clinical Protocol Development](#)

Grantsmanship Resources – NIH

[NIH Parent Announcements](#)

[Office of Extramural Research](#)

[Grant Application Basics](#)

[Center for Scientific Review](#)

[Small Business Funding Opportunities](#)

[New and Early Stage Investigator Policies](#)

Questions??